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May 8, 1967

Attention: Ed D.

Gentlemen:

[redacted] is pleased to submit firm cost and delivery quotes for production quantities of Improved Anamorphic Eyepieces.

These eyepieces will be constructed generally in accordance with the prototype pair built and delivered under Contract [redacted] dated June 25, 1965. Certain performance and design specifications have been changed as a result of technical evaluation and recommendations from your personnel and also the opportunity for us to lower manufacturing and assembly costs for a production quantity.

Performance specifications for these eyepieces are being finalized and will be delivered shortly.

Please note the delivery schedule listed on the attached cost sheet. In order for [redacted] to meet this schedule, we will have to order optical materials for the production quantities before we receive approval of the prototype. This will require an agreement in the contract so that we may be covered for any cost incurred before receipt of approval. If this arrangement is unsatisfactory, then the total delivery schedule will lengthen considerably.

For any questions concerning this quotation, please contact either the writer or [redacted]

Very truly yours,

[redacted]  
Enc.

Contract Administrator  
Photogrammetric Contracts Section

May 8, 1967

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**\*DELIVERY SCHEDULE:** One preproduction pair to be delivered six months after receipt of order.

Three production pairs to be delivered ten months after receipt of order.

Five per month starting eleven months after receipt of order, and continuing until fifteenth month after receipt of order.

Eight per month starting sixteen months after receipt of order and continuing at that rate.

**\*See attached letter.**

Tentative Performance Specifications  
Variable Anamorphic Eyepieces

1. Anamorphic ratio:

a. Scale accuracy: The measured anamorphic ratios shall be within  $\pm .03$  of the scale value for all midscale values. When the measured anamorphic ratio is 1 to 1, the scale value shall be 1 within  $\pm .5\text{mm}$ . When the scale is set at 2.2 the measured anamorphic ratio shall be at least 2.15 to 1.

b. Range: The ratio of the maximum obtainable anamorphic ratio to the minimum obtainable anamorphic ratio shall be at least 2.19.

2. Resolution: When the eyepiece is tested in combination with any Zoom 70, the resolution reading at any anamorphic setting shall not be less than  $\_\_\_\%$  of that Zoom 70's reading with the 10X Widefield eyepiece with white fluorescent light.

3. Transmission: When a circular beam of collimated white light equal in diameter to the nominal exit pupil of the eyepiece is directed into the eyepiece end of the instrument  $\_\_\_\%$  shall emerge from the object end as compared to the entering amount light at any orientation of the anamorphic axis when the anamorphic ratio is set at 1 to 1.

4. Magnification: The magnification of the eyepiece shall be 10X  $\pm 5\%$  when measured perpendicular to the stretch axis at any setting of the anamorphic controls.

5. Image Runout: The image of a point at the center of the eyepiece object plane shall not run out more than 1mm TIR in the eyepiece image plane when the anamorphic axis orientation is rotated  $360^\circ$  at 1:1 anamorphic ratio.

6. Image Vignetting: There shall be no noticeable vignetting at any position or value of the anamorphic controls.

7. Field Out-In: The amount of field cut-in observable when rotating the anamorphic axis orientation must not exceed .2mm in the eyepiece focal plane.

\*Since this value is technically difficult to compute, it is advisable to assign it after measurement of an acceptable prototype or first lot.

4/5/67